

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
13 January 2005 (13.01.2005)

PCT

(10) International Publication Number
WO 2005/002596 A1

(51) International Patent Classification⁷:
A61F 2/02, C08F 290/06, C08G 63/47

A61K 31/74

(74) Agent: **VAN SOMEREN, Petronella, Francisca, Hendrika, Maria**; Arnold & Siedsma, Sweelinckplein 1, NL-2517 GK The Hague (NL).

(21) International Application Number:
PCT/EP2003/011456

(81)

Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(22) International Filing Date: 15 October 2003 (15.10.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:
03077105.9 3 July 2003 (03.07.2003) EP

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(71) Applicant (for all designated States except US): **UNIVERSITEIT TWENTE [NL/NL]**; Drienerloolaan 5, NL-7522 NB Enschede (NL).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.



WO 2005/002596 A1

(54) Title: **BIOCOMPATIBLE POLYMER NETWORKS**

(57) **Abstract:** The present invention relates to functionalized prepolymers and to biocompatible polymer networks, especially biodegradable polymer networks obtainable by polymerization of the functionalized prepolymers by for example ultraviolet (UV), redox, and/or heat radical polymerization. Functionalized prepolymers (macromers) are obtainable by reaction of a prepolymer comprising at least one alcohol, amine, and/or sulphydryl group, with an unsaturated monoesterified dicarboxylic acid, especially fumaric acid monoethyl ester.